Patentanwälte

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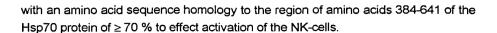
ART 34 AMDT

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English translation of the amended claims

- 1. Use of a Hsp70 protein which does not form a complex with peptides when isolated together with these from tumour cells, a C-terminal fragment thereof or a derivative thereof or a protein with an amino acid sequence homology to the region of amino acids 384-641 of the Hsp70 protein of ≥ 70 % for the production of a pharmaceutical preparation, a medical product or a medical adjuvant for the activation of NK-cells.
- Use of a Hsp70 protein which does not form a complex with peptides when isolated together with these from tumour cells, a C-terminal fragment thereof or a derivative thereof or a protein with an amino acid sequence homology to the region of amino acids 384-641 of the Hsp70 protein of ≥ 70 % for the in vitro or ex vivo activation of NK-cells.
- 3. Use according to claim 1 or 2, wherein the activation comprises the induction of an immune response mediated by NK-cells.
- Use according to any one of claims 1 to 3, wherein the activation includes a stimulation of the proliferation of NK-cells and/or an increase of the cytolytic activity of NK-cells.
- 5. Use according to claim 4, wherein the cytolytic activity against tumour cells, cells from patients with infectious diseases is increased.
- Use according to claim 5, wherein the cytolytic activity against leukaemia cells, lymphoma cells, tumour cells, metastasizing cells of solid tumours and cells of patients with viral, mycotic and/or bacterial infectious diseases is increased.
- 7. A method for the ex vivo or in vitro activation of NK-cells, wherein a physiological cell suspension containing NK-cells is mixed and incubated with a Hsp70 protein which does not form a complex with peptides when isolated together with these from tumour cells, a C-terminal fragment thereof or a derivative thereof or a protein

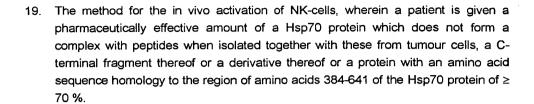




- 8. The method according to claim 7, wherein the activation comprises a stimulation of the proliferation of the NK-cells and/or an increase of their cytotoxicity.
- The method according to claim 7 or 8, wherein peripheral, mononucleic blood cells
 or a fraction containing NK-cells is used as physiological cell suspension containing
 NK-cells.
- 10. The method according to any one of claims 7 to 9, wherein the cell suspension further contains human or animal cells expressing Hsp70 on the cell surface.
- 11. The method according to claim 10, wherein tumour cells, cells of patients with infectious diseases are used as human or animal cells.
- The method according to claim 11, wherein leukaemia cells, lymphoma cells, tumour cells, metastasizing cells of solid tumours and cells of patients with viral, mycotic and/or bacterial infectious diseases are used as human or animal cells.
- 13. The method according to any one of claims 7 to 12, wherein the physiological cell suspension containing the cells and proteins is incubated for at least 3 hours.
- 14. The method according to claim 13, wherein the incubation is carried out for 4 days.
- 15. The method according to any one of claims 1 to 6 or the method according to any one of claims 7 to 14, wherein a cytokine is used in addition.
- 16. Use or method according to claim 15, wherein an interleukin is used as cytokine.
- Use or method according to claim 16, wherein IL-2, IL-12 and/or IL-15 is used as interleukin.
- 18. A method for the in vivo activation of the immune system, wherein a patient is given a pharmaceutically effective amount of NK-cells activated according to the method according to any one of claims 7 to 17, optionally in combination with or before a pharmaceutically effective amount of Hsp70 protein, a C-terminal fragment thereof or a derivative thereof or a protein with an amino acid sequence homology to the region of amino acids 384-641 of the Hsp70 protein of ≥ 70 %.

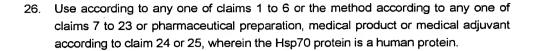
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- 20. The method for the treatment of tumours, cancer diseases, infectious diseases or autoimmune diseases, wherein a patient is given a pharmaceutically effective amount of NK-cells activated according to the method according to any one of claims 7 to 17 and/or a Hsp70 protein which does not form a complex with peptides when isolated together with these from tumour cells, a C-terminal fragment thereof or a derivative thereof or a protein with an amino acid sequence homology to the region of amino acids 384-641 of the Hsp70 protein of ≥ 70 %.
- 21. The method according to claim 20, wherein the tumour is a solid tumour or a metastasis.
- 22. The method according to claim 20, wherein the cancer disease is leukaemia or a lymphoma.
- 23. The method according to claim 20, wherein the infectious disease has a viral, mycological or bacterial origin.
- 24. Pharmaceutical preparation, medical product or medical adjuvant containing a Hsp70 protein, a C-terminal fragment thereof or a derivative thereof or a protein with an amino acid sequence homology to the region of amino acids 384-641 of the Hsp70 protein of ≥ 70 % and/or NK-cells activated according to the method according to any one of claims 7 to 17 in a therapeutically effective amount as well as optionally common carrier substances and/or adjuvants except for Hsp70 protein which forms a complex with peptides when isolated together with these from tumour cells.
- Pharmaceutical preparation, medical product or medical adjuvant according to claim
 wherein the protein is present in a concentration of at least 1 μg/ml, preferably
 up to 1000 μg/ml.





- 27. Use according to any one of claims 1 to 6 or 26 or the method according to any one of claims 7 to 23 or 26 or pharmaceutical preparation, medical product or medical adjuvant according to any one of claims 24 to 26, wherein the Hsp70 protein or its fragment or derivative is a recombinant protein.
- 28. Use according to any one of claims 1 to 6, 26 or 27 or the method according to any one of claims 7 to 23, 26 or 27 or pharmaceutical preparation, medical product or medical adjuvant according to claim 24 to 27, wherein the Hsp70 protein comprises the C-terminal fragment (amino acids 384 to 561) of the human Hsp70 or the corresponding region of another Hsp70 comprising the effects of the invention.
- 29. Use of the NK-cells treated according to a method according to one or more of the above claims for the therapy of tumour diseases and/or infectious diseases.
- Use according to claim 29, wherein the therapy is carried out by re-infusion of the treated NK-cells.